

JC20 Rec'd PCT/PTO 13 OCT 2009

SEQUENCE LISTING

<110> AIYAR, JAYASHREE
COHEN, CHARLES JAY
WILLIAMS, MARK EDWARD

<120> SPLICE VARIANTS OF HUMAN VOLTAGE-GATED
CALCIUM CHANNEL ALPHA 2 DELTA-2 SUBUNIT DESIGNATED - ALPHA 2
DELTA2-A AND ALPHA 2 DELTA 2-B

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<150> PCT/US2004/012045

<151> 2004-04-16

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<151> 2003-04-18

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Arg Thr Ala Arg Pro Trp Pro Gly Cys Gly Pro His Pro Gly Pro Gly
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Thr Arg Arg Pro Thr Ser Gly Pro Pro Arg Pro Leu Trp Leu Leu Leu
35     40     45
Pro Leu Leu Pro Leu Leu Ala Ala Pro Gly Ala Ser Ala Tyr Ser Phe
50     55     60
Pro Gln Gln His Thr Met Gln His Trp Ala Arg Arg Leu Glu Gln Glu
65     70     75     80
Val Asp Gly Val Met Arg Ile Phe Gly Gly Val Gln Gln Leu Arg Glu
85     90     95
Ile Tyr Lys Asp Asn Arg Asn Leu Phe Glu Val Gln Glu Asn Glu Pro
100    105    110
Gln Lys Leu Val Glu Lys Val Ala Gly Asp Ile Glu Ser Leu Leu Asp
115    120    125
Arg Lys Val Gln Ala Leu Lys Arg Leu Ala Asp Ala Ala Glu Asn Phe
130    135    140
Gln Lys Ala His Arg Trp Gln Asp Asn Ile Lys Glu Glu Asp Ile Val
145    150    155    160
Tyr Tyr Asp Ala Lys Ala Asp Ala Glu Leu Asp Asp Pro Glu Ser Glu
165    170    175
Asp Val Glu Arg Gly Ser Lys Ala Ser Thr Leu Arg Leu Asp Phe Ile
180    185    190
Glu Asp Pro Asn Phe Lys Asn Lys Val Asn Tyr Ser Tyr Ala Ala Val
195    200    205
Gln Ile Pro Thr Asp Ile Tyr Lys Gly Ser Thr Val Ile Leu Asn Glu
210    215    220
Leu Asn Trp Thr Glu Ala Leu Glu Asn Val Phe Met Glu Asn Arg Arg

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225					230					235				240
Gln	Asp	Pro	Thr	Leu	Leu	Trp	Gln	Val	Phe	Gly	Ser	Ala	Thr	Gly
				245					250					255
Thr	Arg	Tyr	Tyr	Pro	Ala	Thr	Pro	Trp	Arg	Ala	Pro	Lys	Lys	Ile
			260					265					270	Asp
Leu	Tyr	Asp	Val	Arg	Arg	Arg	Pro	Trp	Tyr	Ile	Gln	Gly	Ala	Ser
		275					280					285		Ser
Pro	Lys	Asp	Met	Val	Ile	Ile	Val	Asp	Val	Ser	Gly	Ser	Val	Ser
	290					295					300			Gly
Leu	Thr	Leu	Lys	Leu	Met	Lys	Thr	Ser	Val	Cys	Glu	Met	Leu	Asp
305					310					315				320
Leu	Ser	Asp	Asp	Asp	Tyr	Val	Asn	Val	Ala	Ser	Phe	Asn	Glu	Lys
				325					330					335
Gln	Pro	Val	Ser	Cys	Phe	Thr	His	Leu	Val	Gln	Ala	Asn	Val	Arg
			340					345					350	Asn
Lys	Lys	Val	Phe	Lys	Glu	Ala	Val	Gln	Gly	Met	Val	Ala	Lys	Gly
		355					360					365		Thr
Thr	Gly	Tyr	Lys	Ala	Gly	Phe	Glu	Tyr	Ala	Phe	Asp	Gln	Leu	Gln
370					375						380			Asn
Ser	Asn	Ile	Thr	Arg	Ala	Asn	Cys	Asn	Lys	Met	Ile	Met	Met	Phe
385					390					395				400
Asp	Gly	Gly	Glu	Asp	Arg	Val	Gln	Asp	Val	Phe	Glu	Lys	Tyr	Asn
				405					410					415
Pro	Asn	Arg	Thr	Val	Arg	Val	Phe	Thr	Phe	Ser	Val	Gly	Gln	His
			420					425					430	Asn
Tyr	Asp	Val	Thr	Pro	Leu	Gln	Trp	Met	Ala	Cys	Ala	Asn	Lys	Gly
	435						440					445		Tyr
Tyr	Phe	Glu	Ile	Pro	Ser	Ile	Gly	Ala	Ile	Arg	Ile	Asn	Thr	Gln
450						455					460			Glu
Tyr	Leu	Asp	Val	Leu	Gly	Arg	Pro	Met	Val	Leu	Ala	Gly	Lys	Glu
465					470					475				480
Lys	Gln	Val	Gln	Trp	Thr	Asn	Val	Tyr	Glu	Asp	Ala	Leu	Gly	Leu
				485					490					495
Leu	Val	Val	Thr	Gly	Thr	Leu	Pro	Val	Phe	Asn	Leu	Thr	Gln	Asp
			500					505					510	Gly
Pro	Gly	Glu	Lys	Lys	Asn	Gln	Leu	Ile	Leu	Gly	Val	Met	Gly	Ile
	515						520					525		Asp
Val	Ala	Leu	Asn	Asp	Ile	Lys	Arg	Leu	Thr	Pro	Asn	Tyr	Thr	Leu
	530					535					540			Gly
Ala	Asn	Gly	Tyr	Val	Phe	Ala	Ile	Asp	Leu	Asn	Gly	Tyr	Val	Leu
545					550					555				560
His	Pro	Asn	Leu	Lys	Pro	Gln	Thr	Thr	Asn	Phe	Arg	Glu	Pro	Val
				565					570					575
Leu	Asp	Phe	Leu	Asp	Ala	Glu	Leu	Glu	Asp	Glu	Asn	Lys	Glu	Glu
			580					585					590	Ile
Arg	Arg	Ser	Met	Ile	Asp	Gly	Asn	Lys	Gly	His	Lys	Gln	Ile	Arg
		595					600					605		Thr
Leu	Val	Lys	Ser	Leu	Asp	Glu	Arg	Tyr	Ile	Asp	Glu	Val	Thr	Arg
	610					615					620			Asn
Tyr	Thr	Trp	Val	Pro	Ile	Arg	Ser	Thr	Asn	Tyr	Ser	Leu	Gly	Leu
625					630					635				640
Leu	Pro	Pro	Tyr	Ser	Thr	Phe	Tyr	Leu	Gln	Ala	Asn	Leu	Ser	Asp
				645					650					655
Ile	Leu	Gln	Val	Lys	Tyr	Phe	Glu	Phe	Leu	Leu	Pro	Ser	Ser	Phe
			660					665					670	Glu
Ser	Glu	Gly	His	Val	Phe	Ile	Ala	Pro	Arg	Glu	Tyr	Cys	Lys	Asp
	675						680					685		Leu

Asn	Ala	Ser	Asp	Asn	Asn	Thr	Glu	Phe	Leu	Lys	Asn	Phe	Ile	Glu	Leu
690						695					700				
Met	Glu	Lys	Val	Thr	Pro	Asp	Ser	Lys	Gln	Cys	Asn	Asn	Phe	Leu	Leu
705					710					715					720
His	Asn	Leu	Ile	Leu	Asp	Thr	Gly	Ile	Thr	Gln	Gln	Leu	Val	Glu	Arg
				725					730					735	
Val	Trp	Arg	Asp	Gln	Asp	Leu	Asn	Thr	Tyr	Ser	Leu	Leu	Ala	Val	Phe
			740					745					750		
Ala	Ala	Thr	Asp	Gly	Gly	Ile	Thr	Arg	Val	Phe	Pro	Asn	Lys	Ala	Ala
		755					760					765			
Glu	Asp	Trp	Thr	Glu	Asn	Pro	Glu	Pro	Phe	Asn	Ala	Ser	Phe	Tyr	Arg
	770					775					780				
Arg	Ser	Leu	Asp	Asn	His	Gly	Tyr	Val	Phe	Lys	Pro	Pro	His	Gln	Asp
785					790					795					800
Ala	Leu	Leu	Arg	Pro	Leu	Glu	Leu	Glu	Asn	Asp	Thr	Val	Gly	Ile	Leu
				805					810					815	
Val	Ser	Thr	Ala	Val	Glu	Leu	Ser	Leu	Gly	Arg	Arg	Thr	Leu	Arg	Pro
			820					825					830		
Ala	Val	Val	Gly	Val	Lys	Leu	Asp	Leu	Glu	Ala	Trp	Ala	Glu	Lys	Phe
		835					840					845			
Lys	Val	Leu	Ala	Ser	Asn	Arg	Thr	His	Gln	Asp	Gln	Pro	Gln	Lys	Cys
	850					855					860				
Gly	Pro	Asn	Ser	His	Cys	Glu	Met	Asp	Cys	Glu	Val	Asn	Asn	Glu	Asp
865					870					875					880
Leu	Leu	Cys	Val	Leu	Ile	Asp	Asp	Gly	Gly	Phe	Leu	Val	Leu	Ser	Asn
				885					890					895	
Gln	Asn	His	Gln	Trp	Asp	Gln	Val	Gly	Arg	Phe	Phe	Ser	Glu	Val	Asp
			900					905					910		
Ala	Asn	Leu	Met	Leu	Ala	Leu	Tyr	Asn	Asn	Ser	Phe	Tyr	Thr	Arg	Lys
		915					920					925			
Glu	Ser	Tyr	Asp	Tyr	Gln	Ala	Cys	Ala	Pro	Gln	Pro	Pro	Gly	Asn	
	930					935				940					
Leu	Gly	Ala	Ala	Pro	Arg	Gly	Val	Phe	Val	Pro	Thr	Val	Ala	Asp	Phe
945					950					955					960
Leu	Asn	Leu	Ala	Trp	Trp	Thr	Ser	Ala	Ala	Ala	Trp	Ser	Leu	Phe	Gln
				965					970					975	
Gln	Leu	Leu	Tyr	Gly	Leu	Ile	Tyr	His	Ser	Trp	Phe	Gln	Ala	Asp	Pro
			980					985					990		
Ala	Glu	Ala	Glu	Gly	Ser	Pro	Glu	Thr	Arg	Glu	Ser	Ser	Cys	Val	Met
		995					1000					1005			
Lys	Gln	Thr	Gln	Tyr	Tyr	Phe	Gly	Ser	Val	Asn	Ala	Ser	Tyr	Asn	Ala
	1010					1015				1020					
Ile	Ile	Asp	Cys	Gly	Asn	Cys	Ser	Arg	Leu	Phe	His	Ala	Gln	Arg	Leu
1025					1030					1035					1040
Thr	Asn	Thr	Asn	Leu	Leu	Phe	Val	Val	Ala	Glu	Lys	Pro	Leu	Cys	Ser
				1045					1050					1055	
Gln	Cys	Glu	Ala	Gly	Arg	Leu	Leu	Gln	Lys	Glu	Thr	His	Cys	Pro	Ala
			1060					1065					1070		
Asp	Gly	Pro	Glu	Gln	Cys	Glu	Leu	Val	Gln	Arg	Pro	Arg	Tyr	Arg	Arg
		1075					1080					1085			
Gly	Pro	His	Ile	Cys	Phe	Asp	Tyr	Asn	Ala	Thr	Val	Arg	Arg	Gly	Gly
	1090					1095					1100				
Gly	Gly	Pro	Glu	Ile	Pro	Arg	Pro	Cys	Ala	Arg	Pro	Gly	Arg	Pro	Ala
1105					1110					1115					1120
Pro	Cys	Leu	Ser	Pro	Gln	Glu	Asp	Thr	Ser	Asp	Cys	Gly	Arg	Gly	Ala
				1125					1130					1135	
Ser	Phe	Pro	Pro	Ser	Leu	Gly	Val	Leu	Val	Ser	Leu	Gln	Leu	Leu	Leu

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			1140					1145				1150			
Leu	Leu	Gly	Leu	Pro	Pro	Arg	Pro	Gln	Pro	Gln	Val	Leu	Val	His	Ala
		1155					1160					1165			
Ser	Arg	Arg	Leu												
		1170													